63743

REPORT NUMBER 301L-GTL-04-004

SAFETY COMPLIANCE TESTING FOR FMVSS NO. 301L FUEL SYSTEM INTEGRITY

GENERAL MOTORS CORPORATION 2004 CHEVROLET COLORADO, TRUCK NHTSA NO. C40112

GENERAL TESTING LABORATORIES, INC. 1623 LEEDSTOWN ROAD COLONIAL BEACH, VIRGINIA 22443



OCTOBER 4, 2004

FINAL REPORT

PREPARED FOR

U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SAFETY ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
400 SEVENTH STREET, SW
ROOM 6115 (NVS-220)
WASHINGTON, D.C. 20590

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6 Barrier Information

PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF COMPLIANCE TEST

A 2004 Chevrolet Colorado Truck was subjected to Federal Motor Vehicle Safety Standard (FMVSS) No. 301 testing to determine if the vehicle was in compliance with the requirements of the standard. The purpose of this standard is to reduce deaths and injuries occurring from fires that result from fuel spillage during and after motor vehicle crashes, and resulting from ingestion of fuels during siphoning.

- 1.1 The test vehicle was a 2004 Chevrolet Colorado Truck. Nomenclature applicable to the test vehicle are:
 - A. Vehicle Identification Number: 1GCCS136848149843
 - B. NHTSA No.: C40112
 - C. Manufacturer: GENERAL MOTORS CORPORATION
 - D. Manufacture Date: 02/04

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 301 testing on September 21, 2004.

COMPLIANCE TEST RESULTS SUMMARY

2.0 TEST RESULTS

All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Procedure, TP-301-02 dated 8 November 1994 and General Testing Laboratories, Inc. (GTL) Test Procedure, TP-301-02, "Fuel System Integrity".

Based on the test performed, the 2004 Chevrolet Colorado Truck appears to meet the lateral impact requirements of FMVSS 301 testing.

COMPLIANCE TEST DATA

3.0 TEST RESULTS

The following data sheets document the results of testing on the 2004 Chevrolet Colorado.

SUMMARY OF RESULTS

Vehicle's NHT	SA No.: _	C40112	_ Test M	lodel:	COLORADO
Test Date.: _	09/21/04		Time:	16:20	Temperature 74 ° F
		e, Model and Body ORADO TRUCK	/ Style:		
Vehicle Test V	Veight:	4370 lbs.;	Impact	t Velocity:	19.7 mph
Type of Front	Occupant F	Restraint System I	nstalled in T	est Vehic	le:
Driver's	SDSP: TYP	E 2 BELT WITH F	RONTAL A	IR BAG II	N STEERING WHEEL
Right P	assenger's	DSP: TYPE 2 BE	LT WITH FF	RONTAL	AIR BAG IN DASH
Stoddard solv	ent spillage	from Vehicle's Fu	el System:	None	
REMARKS:					
					<i>,</i>
RECORDED	BY: ————————————————————————————————————	Harden /		DATE:	09/21/04
APPROVEDI	BY:	Momick			

DATA SHEET 1 TEST VEHICLE SPECIFICATIONS

TEST VEHICLE INFORMATION:
NHTSA No.: C40112 Year/Make/Model/Body Style:2004 CHEVROLET COLORADO Engine Data: 3.5 LITER 5 CYLINDERS Transmission Data: 4 SPEED AUTOMATIC Final Drive Data: REAR WHEEL DRIVE WITH 373 RATIO Major Options: 3.5L VORTEC 5 CYLINDER ENGINE Date Received: 07/14/04 ; Odometer Reading: 153 miles
DATA FROM VEHICLE'S CERTIFICATION LABEL:
Vehicle Manufactured By: GENERAL MOTORS CORPORATION Date of Manufacture: 02/04 VIN: 1GCCS136848149843 GVWR: 2268 kg (5000 lbs.); GAWR Front: 1149 kg(2533 lbs.) GAWR Rear: 1314 kg (2896 lbs.)
DATA FROM VEHICLE'S TIRE PLACARD:
Location of Placard on Vehicle: <u>DRIVER'S "B" PILLAR</u> Tire Pressure With Maximum Capacity Vehicle Load — Front: <u>33</u> psi; Rear: <u>33</u> psi Recommended Tire Size: <u>P225/75R15</u> Recommended Cold Tire Pressure:Front = <u>230</u> kPa(33 psi) Rear = <u>230</u> kPa (33 psi) Size of Tires on Test Vehicle: <u>P225/75R15</u> Type of Spare Tire: <u>SPACE SAVER T155/90R16</u>
Vehicle Capacity Data —
Type of Front Seat(s): <u>BUCKET</u> Number of Occupants: Front = <u>2</u> ; Mid = <u>0</u> Rear = <u>3</u> ; Total = <u>5</u>
A. VEHICLE CAPACITY WEIGHT (VCW) = 1212 lbs. B. Number of Occupants x 150 lbs. = 750 lbs. RATED CARGO AND LUGGAGE WEIGHT (RCLW) = A - B = 462 lbs.
RECORDED BY: DATE: 09/21/04 APPROVED BY: N. WILL

DATA SHEET 2 PRE-TEST DATA

WEIGHT OF TEST VEHICLE:

A. As Received At Laboratory (Maximum Fluids) —

Right Front = <u>463</u> kg (1021 lbs.) Right Rear = <u>364</u> kg (802 lbs.)

Left Front = 488 kg (1076 lbs.) Left Rear = 388 kg (855 lbs.)

TOTAL FRONT = 951 kg (2097 lbs.) TOTAL REAR = 752 kg (1657 lbs.)

% of TOTAL = 44 %

TOTAL DELIVERED WEIGHT = 1703 kg (3754 lbs.)

B. Calculation of Target Test Weight —

1. Total Delivered Weight = <u>1703</u> kg (3754 lbs.)

2. Rated Cargo & Lugg. Weight (RCLW) = <u>136</u> kg (300 lbs.)

3. Weight of 2 Dummies (164 lbs. each) = <u>149</u> kg (328 lbs.)

TARGET TEST WEIGHT = 1 + 2 + 3 = 1988 kg (4382 lbs.)

C. Vehicle, Dummies and <u>136</u> kg (300 lbs.) of Cargo Weight —

Right Front = <u>513</u> kg (1132 lbs) Right Rear = <u>456</u> kg (1005 lbs)

Left Front = 537 kg (1183 lbs) Left Rear = 476 kg (1050 lbs)

TOTAL FRONT = 1050 kg (2315 lbs) TOTAL REAR = 932 kg (2055 lbs)

% of TOTAL = <u>53</u> %

% of TOTAL = <u>47</u> %

TOTAL TEST WEIGHT = _____ kg (4370 lbs)

Weight of Ballast secured in cargo area = ____154____ kg (339 lbs)

Type of Ballast: SALT BAGS

Method of Securing Ballast: VEHICLE SEAT BELTS

Vehicle Components Removed for Weight Reduction:

NONE

DATA SHEET 2 PRE-TEST DATA CONTINUED

TEST VEHICLE ATTITUDE:

As Delivered —	Right Front: Left Front:	846 mm (33.3 831 mm (32.7	inches) inches)				
	Right Rear:	859 mm (33.8	inches)				
	Left Rear:	843 mm (33.2	•				
As Tested —	Right Front:	841 mm (33.1 ir	nches)				
	Left Front:	<u>826</u> mm (32.5 ir	nches)				
	Right Rear:	<u>838</u> mm (33.0 ir	nches)				
	Left Rear:	<u>820</u> mm (32.3 ir	nches)				
Vehicle's Wheelba	ase =32	00mm (126 ir	iches)				
FUEL SYSTEM DATA:							
Fuel System Capa Usable Capacity F	•		76 liters (19.5 gallons) 76 liters (19.5 gallons)				
Test Volume Ran	Test Volume Range (91 to 94% of Usable Capacity) —						
67 liters (17.7 gallons) TO 69 liters (18.3 gallons)							
ACTUAL TEST V	OLUME = <u>68</u>	_liters (18.0 gallons)	(with entire fuel system filled)				
Test Fluid Type:	Stoddard solver	nt					
Test Fluid Specific	Gravity: <u>.7583</u>	}					
Test Fluid Kinema	itic Viscosity:	1.7 centistokes at	77° F				
Test Fluid Color: _	BLUE	("red" is prefe	erred)				
Type of Vehicle Fuel Pump: ELECTRIC							
Electric Fuel Pump Operation with Ignition Switch ON and Engine OFF —							
YES, FUEL PUMP WILL RUN FOR TWO TO THREE SECONDS							
•		PRESSURE ELECTI					
	L INJECTORS	<u>WITH LOW PRESSU</u>	IRE RETURN LINE				
TO FUEL TANK.							

REMARKS:

RECORDED BY:

DATE: 09/21/04

APPROVED BY:

DATA SHEET 3 POST IMPACT DATA

TYPE OF TEST: 301L

TEST DATE: 09/21/04 ; TIME: 16:20 ; TEMP.: 74 °F

VEH. NHTSA NO.: C40112 ; VIN: 1GCCS136848149843

REQUIRED IMPACT VELOCITY RANGE: 18.9 to 19.9 mph

ACTUAL IMPACT VELOCITY: (speed traps located within 5 feet of impact plane)

Trap No. 1 = $\underline{19.7}$ mph

Trap No. 2 = $\underline{19.7}$ mph

Average Impact Speed = $\underline{19.7}$ mph

REMARKS:

RECORDED BY:__

DATE: 09/21/04

APPROVED BY:__

DATA SHEET 4 SUMMARY OF FMVSS 301 DATA

TEST VEHI	CLE NHTSA NO.: <u>C40112</u> ;	TEST DATE: 09/21/04						
VEHICLE YEAR/MAKE/MODEL/BODY STYLE: 2004 CHEVROLET COLORADO								
TYPE OF I	MPACT: 301L							
STODDARD SOLVENT SPILLAGE MEASUREMENT:								
Α.	From impact until vehicle motion	ceases —						
	Actual =0	Maximum Allowable = 1 ounce						
₿.	For 5 minute period after vehicle	motion ceases —						
	Actual =0 oz.	Maximum Allowable = 5 ounces						
C.	For next 25 minutes —							
	Actual = <u>0</u> oz.	Maximum Allowable = 1 oz./minute						
D.	Provide Spillage Details:	NONE						
D.	Provide Spillage Details:	NONE						
D.	Provide Spillage Details:	NONE						
D.	Provide Spillage Details:	NONE						
		NONE						
D. REMARKS		NONE						
		NONE						
		NONE						
		NONE						
		NONE						

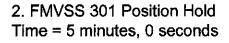
DATA SHEET 5 STATIC ROLLOVER TEST DATA:

A. Test Phase = 0° to 90°

Determination of Stoddard Solvent Collection Time Period:

1. Rollover Fixture 90° Rotation Time = $\underline{1}$ minutes, $\underline{36}$ seconds

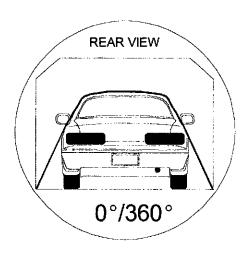
(Specified Range is 1 to 3 minutes)

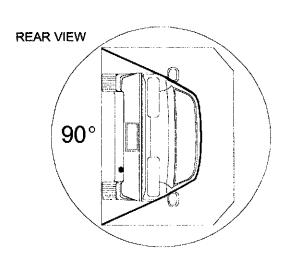


- 3. TOTAL = 6 minutes, 36 seconds
- 4. NEXT WHOLE MINUTE INTERVAL = 7 minutes

Actual Test Vehicle Stoddard Solvent Spillage:

- 1. First 5 minutes from onset of rotation = 0 oz. (5 oz. allowed)
- 2. 6th minute = <u>0</u> oz. (1 oz. allowed)
- 3. 7th minute = 0 oz. (1 oz. allowed)
- 4. 8th minute (if required) = N/A oz. (1 oz. allowed)





DATA SHEET 5 CONTINUED

B. Test Phase = 90° to 180°

Determination of Stoddard Solvent Collection Time Period:

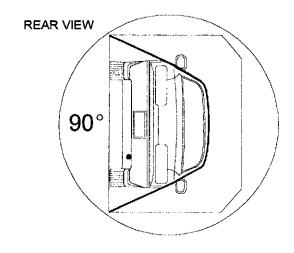
Rollover Fixture 90°
 Rotation Time = 1 minutes,
 35 seconds

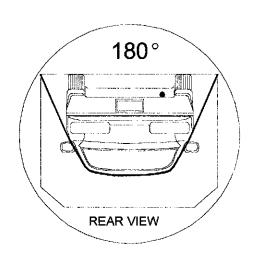
(Specified Range is 1 to 3 minutes)

- 2. FMVSS 301 Position Hold Time = 5 minutes, 0 seconds
- 3. TOTAL = 6 minutes, 35 seconds
- 4. NEXT WHOLE MINUTE INTERVAL = 7 minutes

Actual Test Vehicle Stoddard Solvent Spillage:

- First 5 minutes from onset of rotation = 0 oz.
 (5 oz. allowed)
- 2. 6th minute = <u>0</u> oz. (1 oz. allowed)
- 3. 7th minute = 0 oz. (1 oz. allowed)
- 4. 8th minute (if required) = N/A oz. (1 oz. allowed)





DATA SHEET 5 CONTINUED

C. Test Phase = 180° to 270°

Determination of Stoddard Solvent Collection Time Period:

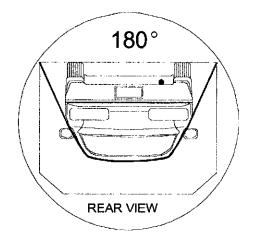
Rollover Fixture 90°
 Rotation Time = 1 minutes,
 24 seconds

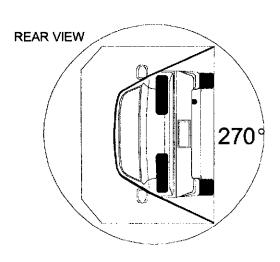
(Specified Range is 1 to 3 minutes)

- 2. FMVSS 301 Position Hold Time = 5 minutes, 0 seconds
- 3. TOTAL = 6 minutes, 24 seconds
- 4. NEXT WHOLE MINUTE INTERVAL = 7 minutes

Actual Test Vehicle Stoddard Solvent Spillage:

- First 5 minutes from onset of rotation = 0 oz.
 oz. allowed)
- 2. 6th minute = <u>0</u> oz. (1 oz. allowed)
- 3. 7th minute = 0 oz. (1 oz. allowed)
- 4. 8th minute (if required) = N/A oz. (1 oz. allowed)





DATA SHEET 5 CONTINUED

D. Test Phase = 270° to 360°

Determination of Stoddard Solvent Collection Time Period:

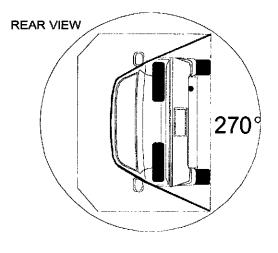
Rollover Fixture 90°
 Rotation Time = 1 minutes,
 45 seconds

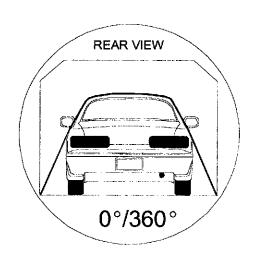
(Specified Range is 1 to 3 minutes)

- 2. FMVSS 301 Position Hold Time = 5 minutes, 0 seconds
- 3. TOTAL = 6 minutes, 45 seconds
- 4. NEXT WHOLE MINUTE INTERVAL = 7 minutes

Actual Test Vehicle Stoddard Solvent Spillage:

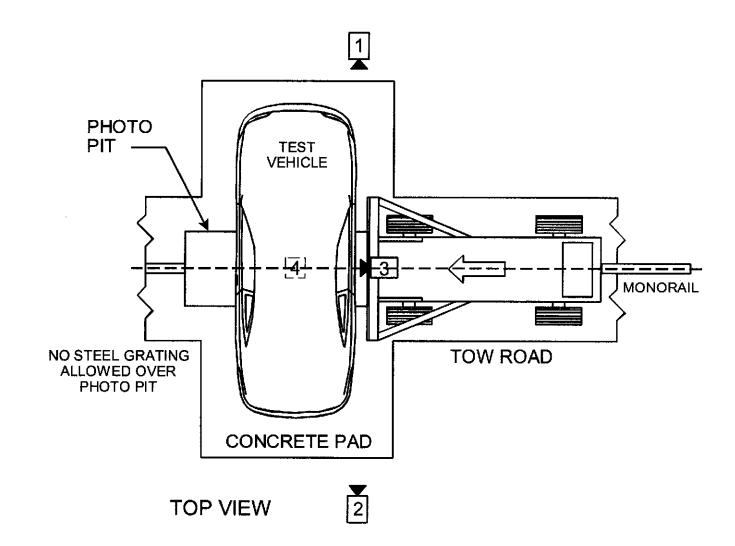
- First 5 minutes from onset of rotation = 0 oz.
 oz. allowed)
- 2. 6th minute = 0 oz. (1 oz. allowed)
- 3. 7th minute = 0 oz. (1 oz. allowed)
- 4. 8th minute (if required) = N/A oz. (1 oz. allowed)





DATA SHEET 6 CAMERA LOCATION

VEHICLE NHTSA NO.: C40112 TEST DATE: 09/21/04



CAMERA 1 – REAR SIDE VIEW OF VEHICLE DURING CRASH

CAMERA 2 - FRONT SIDE VIEW OF VEHICLE DURING CRASH

CAMERA 3 - OVERHEAD VIEW OF ENTIRE IMPACT

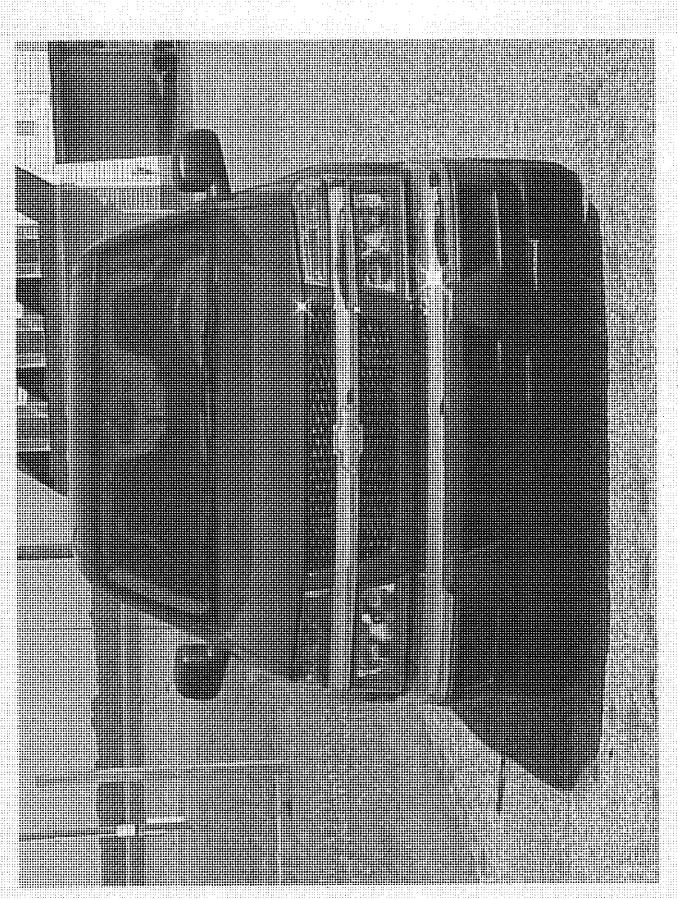
CAMERA 4 - UNDERBODY VIEW OF FUEL TANK LOCATED IN PIT

SECTION 4 INSTRUMENTATION AND EQUIPMENT LIST

TABLE 1 - INSTRUMENTATION & EQUIPMENT LIST

EQUIPMENT	DESCRIPTION	MODEL/ SERIAL NO.	CAL. DATE	NEXT CAL. DATE
COUNTER/TIMER	RACAL-DANA	994343	07/04	07/05
COUNTER/TIMER	SYSTRON DONNER	19 353- 116	07/04	07/05
SPEED TRAP 2	GTL ST1	N/A	09/04	09/05
SPEED TRAP 3	GTL ST2	N/A	09/04	09/05
STOP WATCH	ACCUSPLIT	ACT 1 A&B	07/04	07/05
STOP WATCH	ACCUSPLIT	ACT 2 A&B	07/04	07/05
SCALES	INTERCOMP	199744	07/04	07/05
TIRE PRESSURE GAUGE	WEKSLER	0-100	02/04	02/05
STEEL SCALES	STARRETT	C416R	02/04	02/05
STEEL TAPE	STANLEY	GF2	02/04	02/05
LEVEL	STANLEY	42-449	02/04	02/05
TEMP. INDICATOR	OMEGA	B/5562/14/1	03/04	03/05
TEMP. RECORDER	OMEGA	B/5562/14/1	03/04	03/05

PHOTOGRAPHS



2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301L

FIGURE 5.1 FRONT VIEW OF VEHICLE PRE-TEST

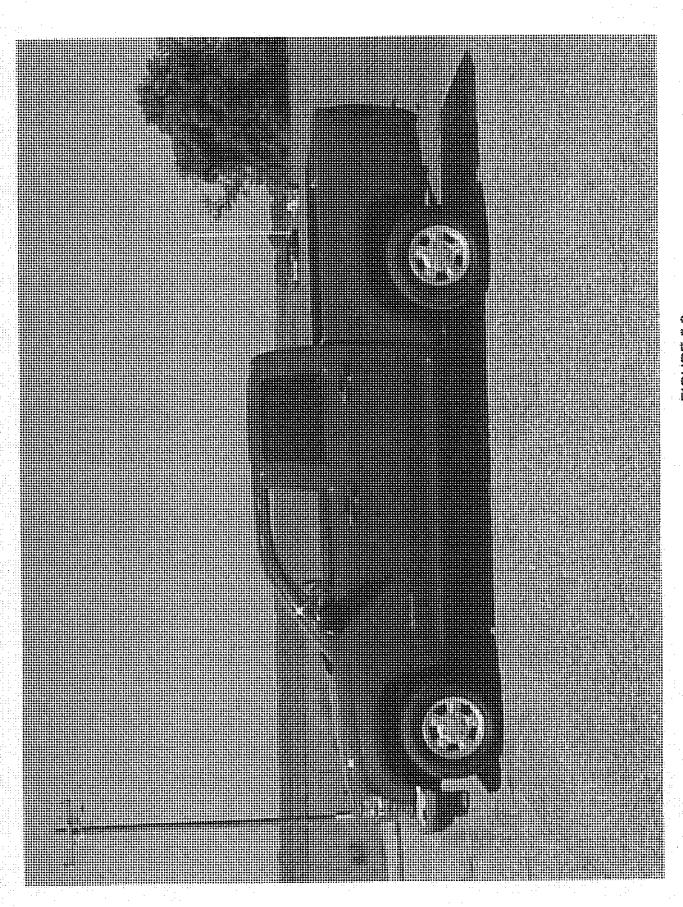
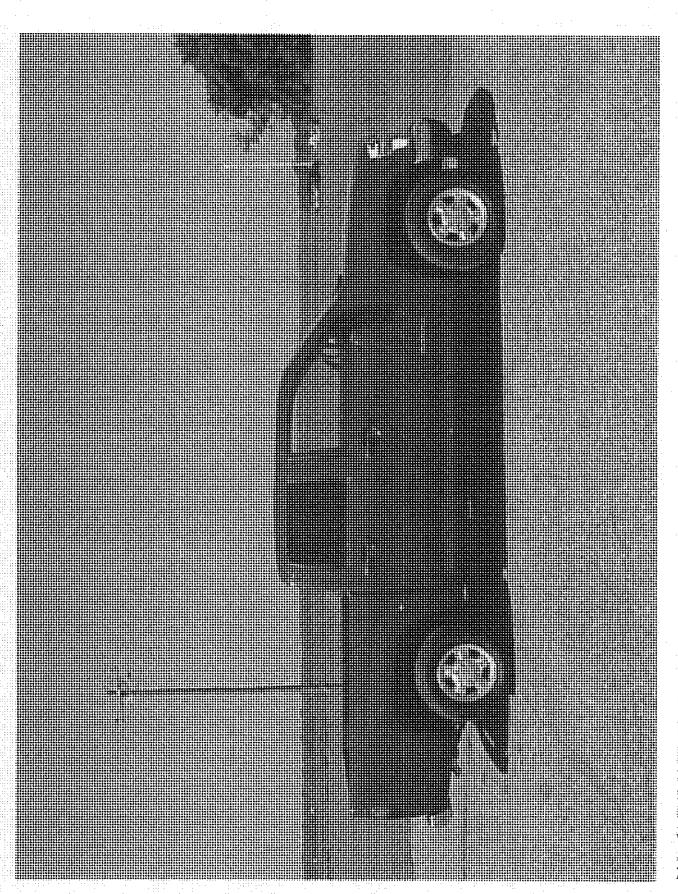


FIGURE 5.2 LEFT SIDE VIEW OF VEHICLE PRE-TEST

2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301L



2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 3011.

FIGURE 5.3 RIGHT SIDE VIEW OF VEHICLE PRE-TEST

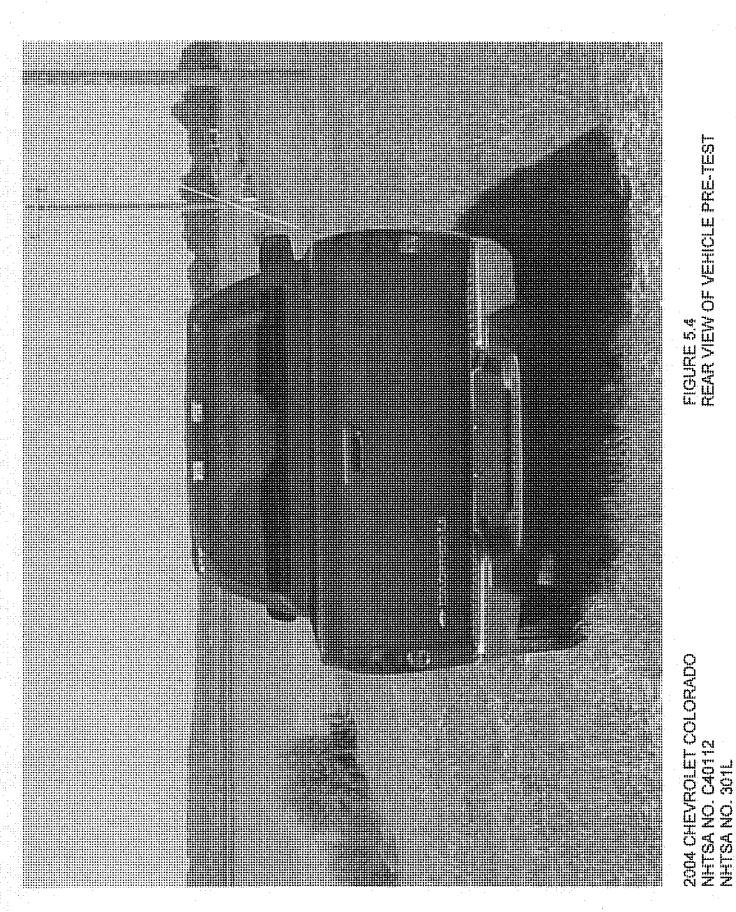
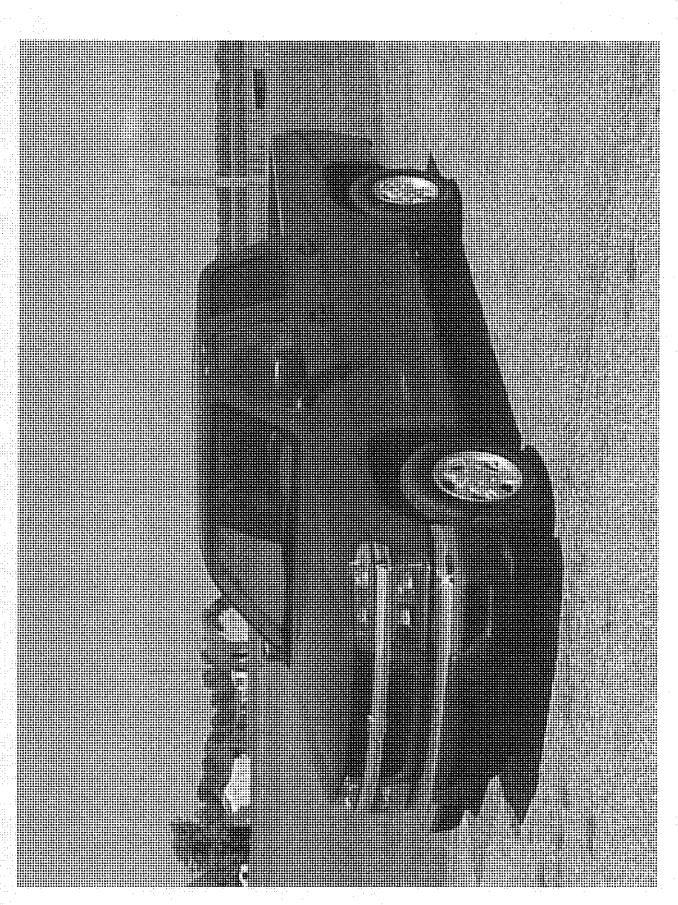
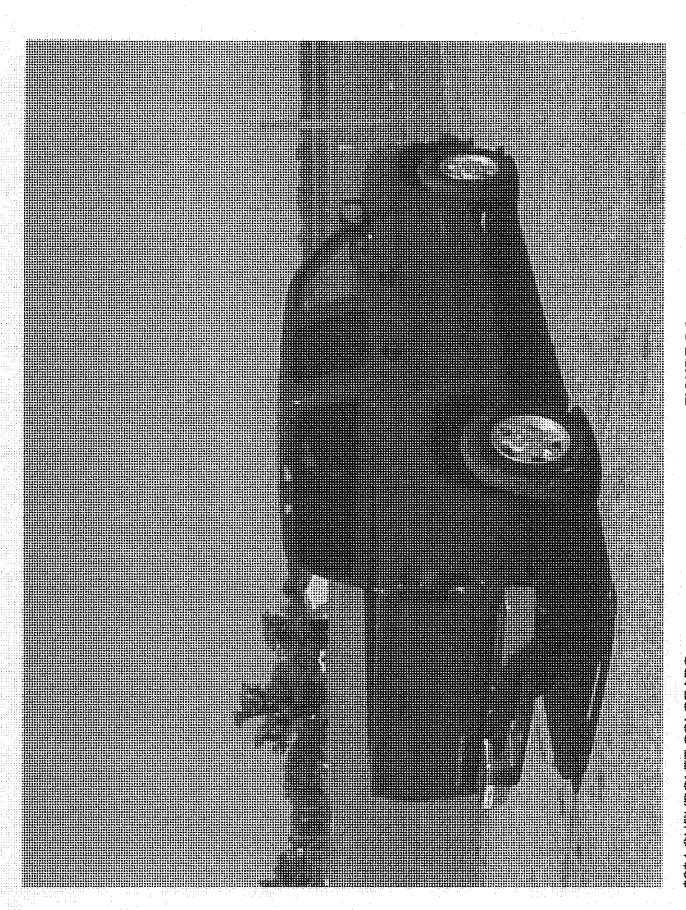


FIGURE 5.4 REAR VIEW OF VEHICLE PRE-TEST



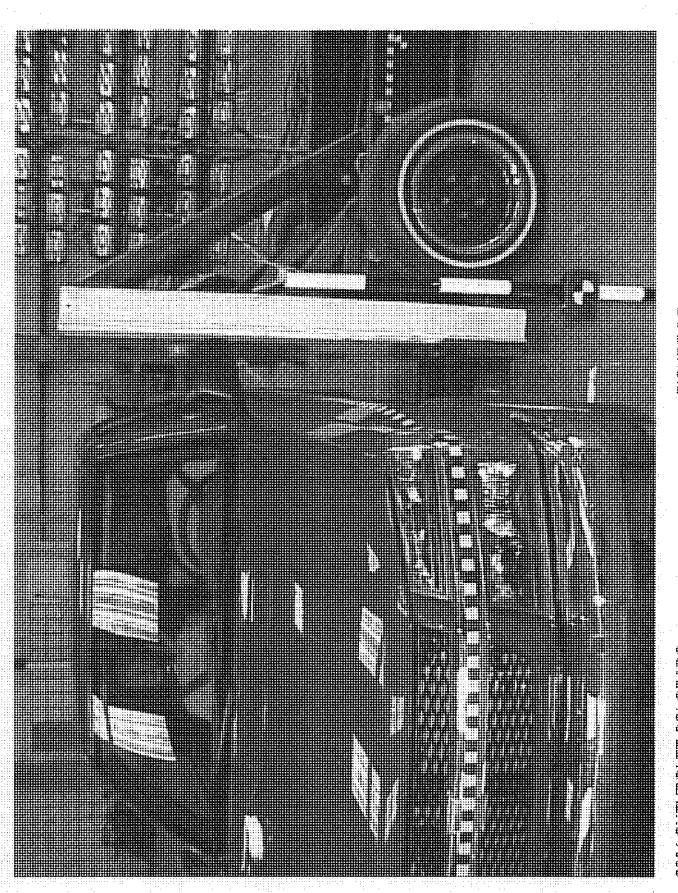
2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301L

FIGURE 5.5 % FRONTAL VIEW FROM LEFT SIDE OF VEHICLE PRE-TEST



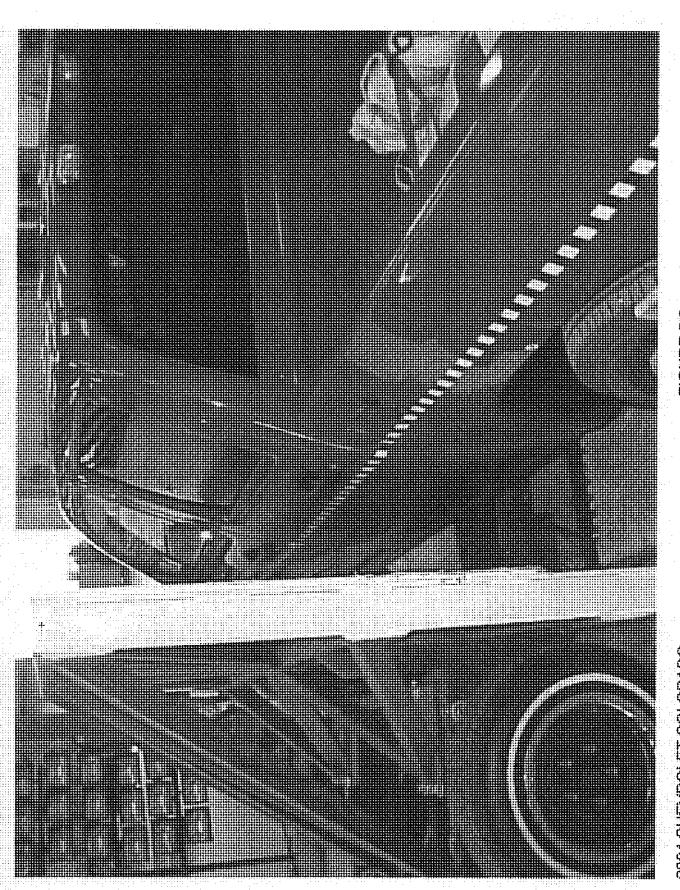
2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301L

FIGURE 5.6 % REAR VIEW FROM RIGHT SIDE OF VEHICLE PRIE-TEST



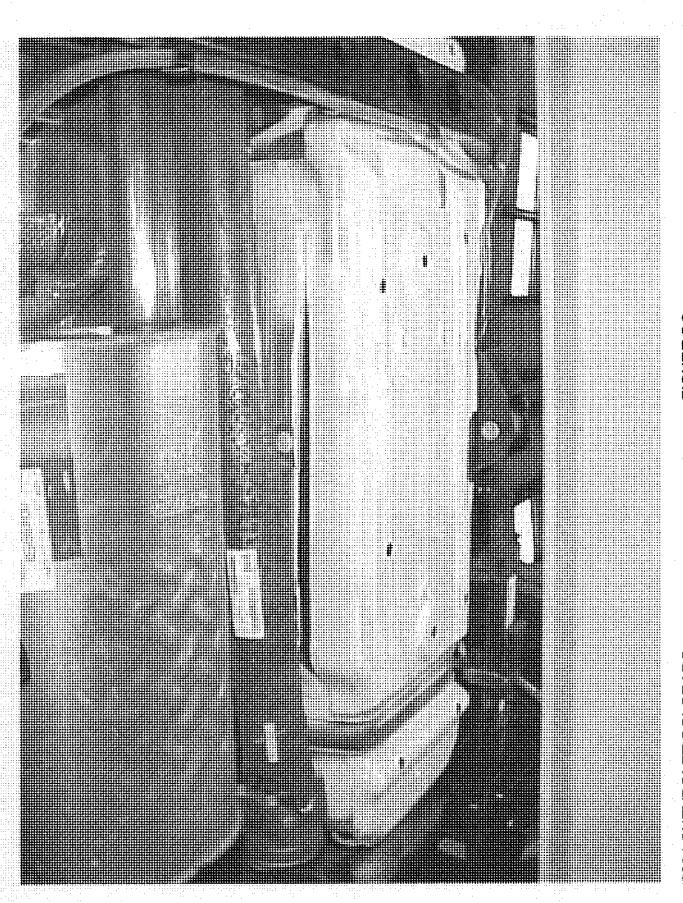
2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 3011.

FIGURE 5.7 LEFT VIEW OF VEHICLE/BARRIER PRE-TEST



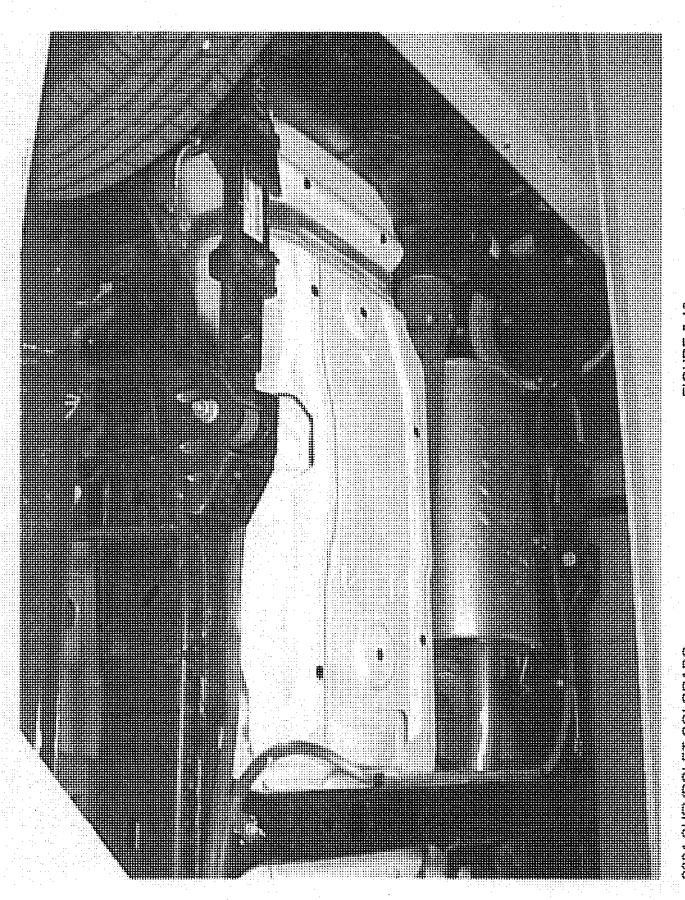
2004 CHEVROLET COLORADO NHTSA NO. CA0112

FIGURE 5.8 RIGHT VIEW OF VEHICLE/BARRIER PRE-TEST



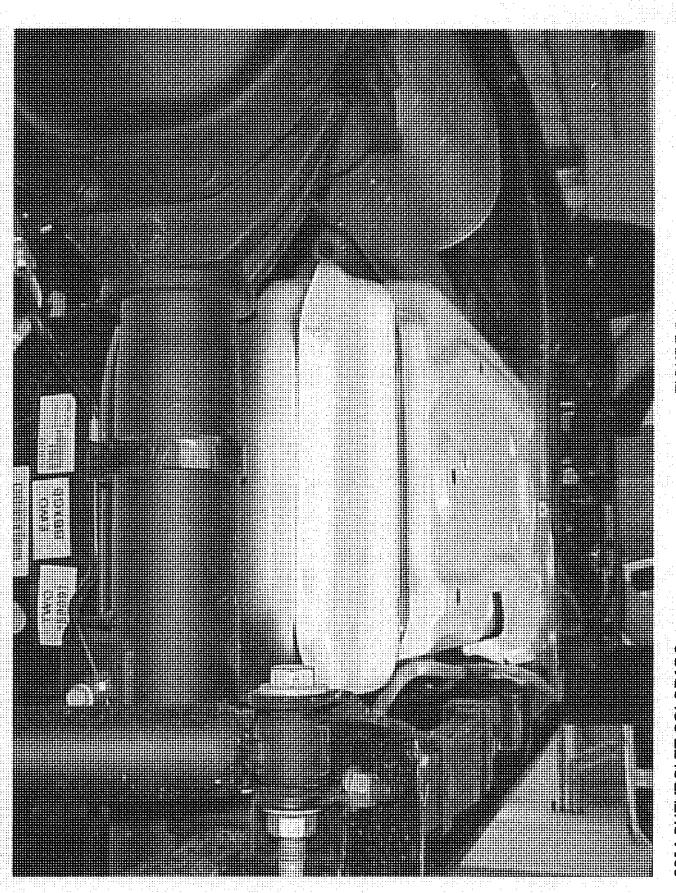
2004 CHEVROLET COLORADO NHTSA NO. CADÍ12 NHTSA NO. 3011.

FIGURE 5.9 UNDERBODY VIEW OF FUEL TANK RIGHT VIEW PRE-TEST



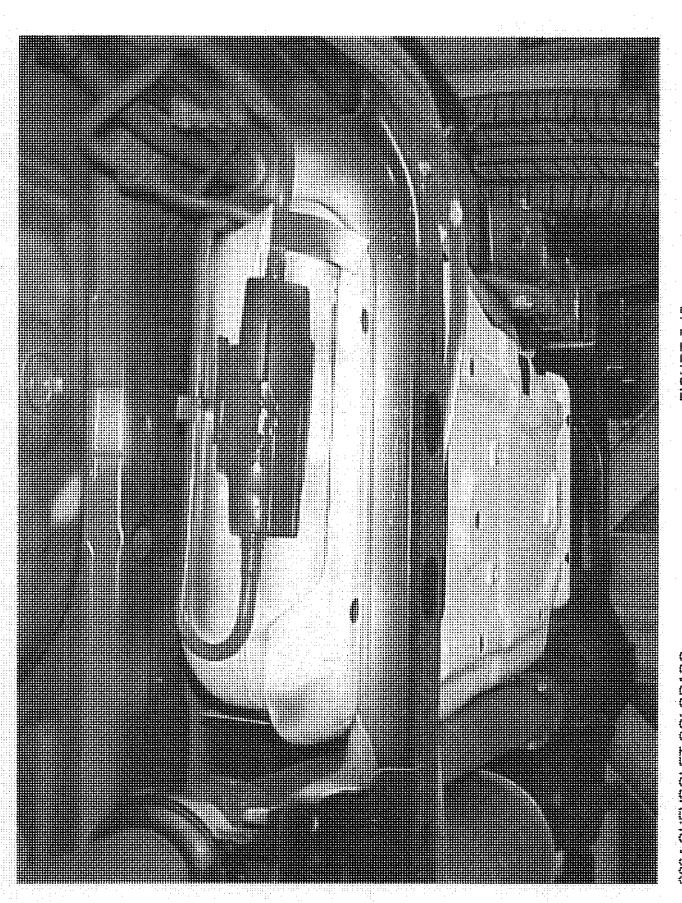
2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301L

FIGURE 5.10 UNDERBODY VIEW OF FUEL TANK LEFT VIEW PRE-TEST



2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 3011.

FIGURE 5.11 UNDERBODY VIEW OF FUEL TANK REAR VIEW PRE-TEST



2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301L

FIGURE 5.12 UNDERBODY VIEW OF FUEL TANK FRONT VIEW PRE-TEST

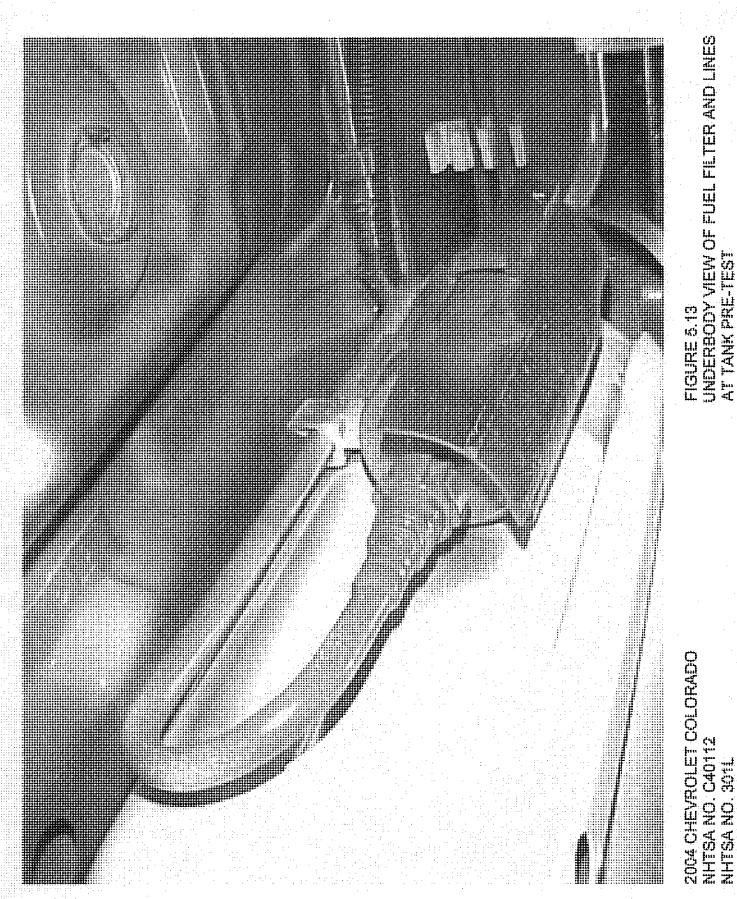
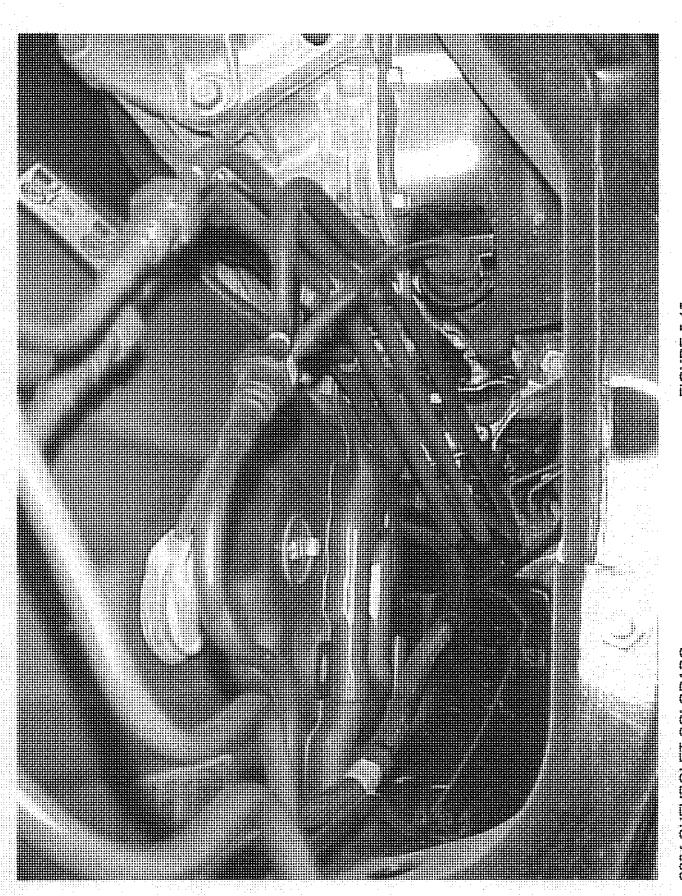


FIGURE 5.13 UNDERBODY VIEW OF FUEL FILTER AND LINES AT TANK PRE-TEST



2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 3011.

FIGURE 5.14 UNDERBODY VIEW OF FUEL LINES IN CENTER PRE-TEST



2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 3011.

FIGURE 5.15 UNDERBODY VIEW OF FUEL LINES TO ENGINE PRE-TEST

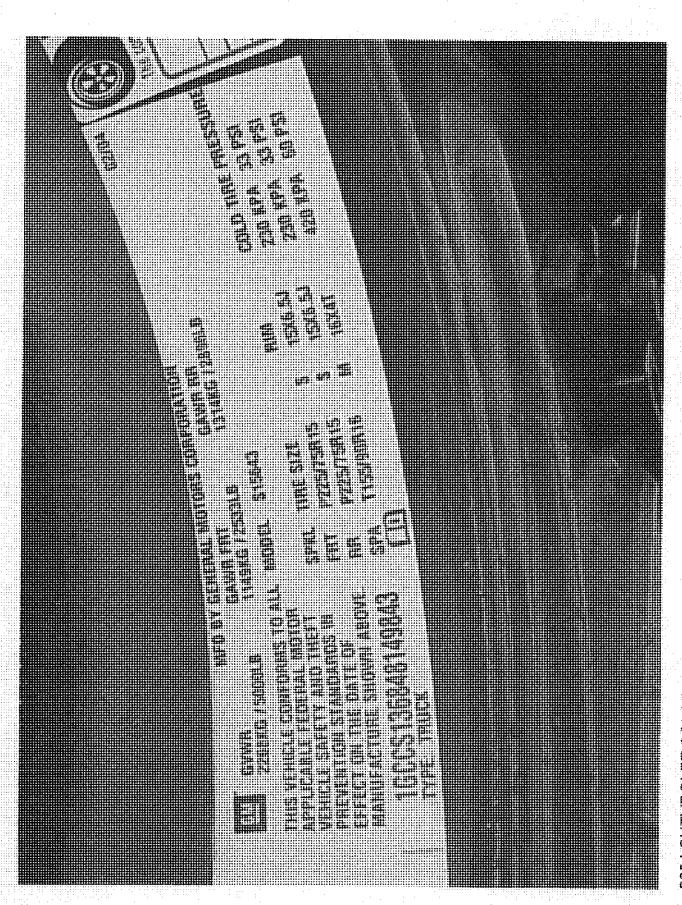


FIGURE 5.16
VEHICLE CERTIFICATION LABEL

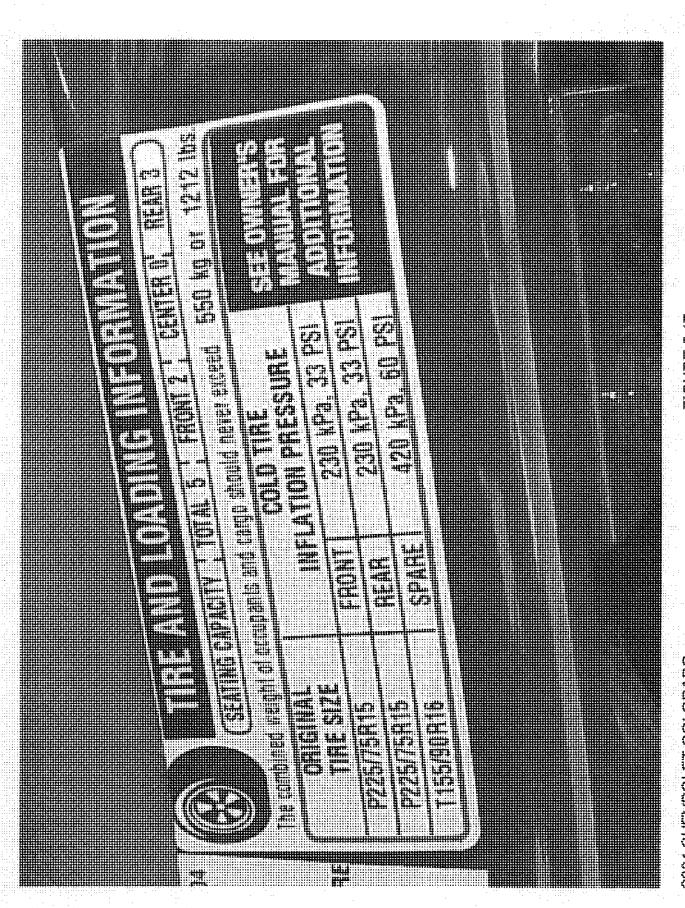


FIGURE 5.17 VEHICLE TIRE INFORMATION LABEL

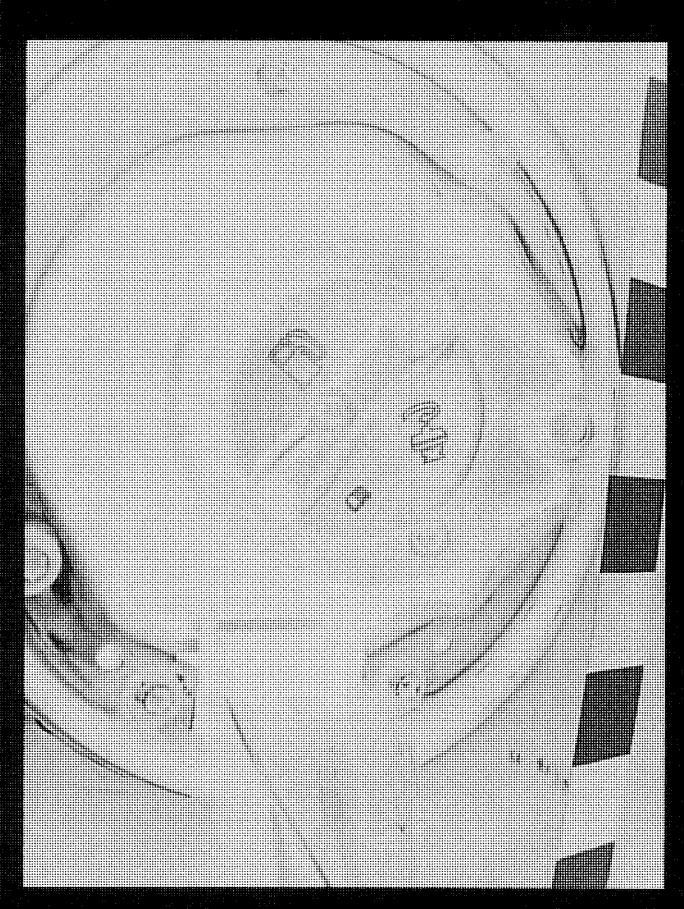


FIGURE 5.18 VEHICLE FUEL CAP PRE-TEST

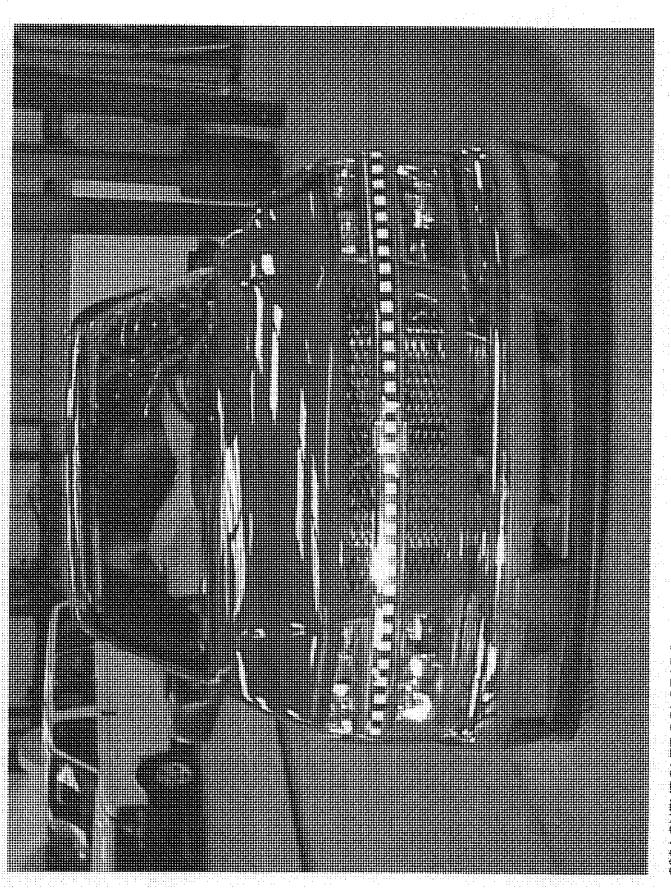


FIGURE 5.19 FRONT VIEW OF VIEHICLE POST TEST

2004 CHEVROLET COLORADO NHITSA NO. C40112 NHITSA NO. 301L

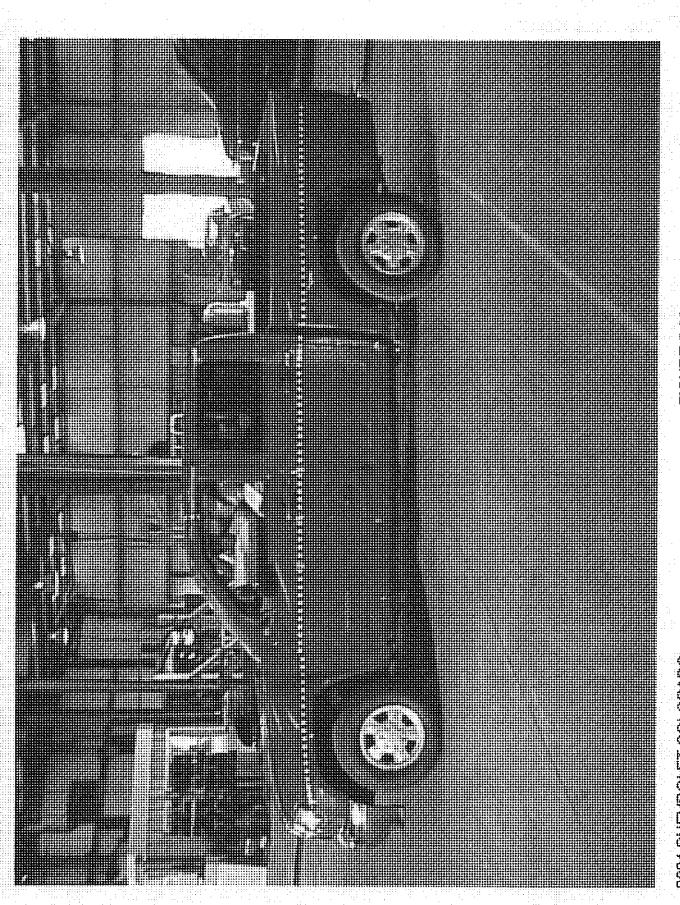
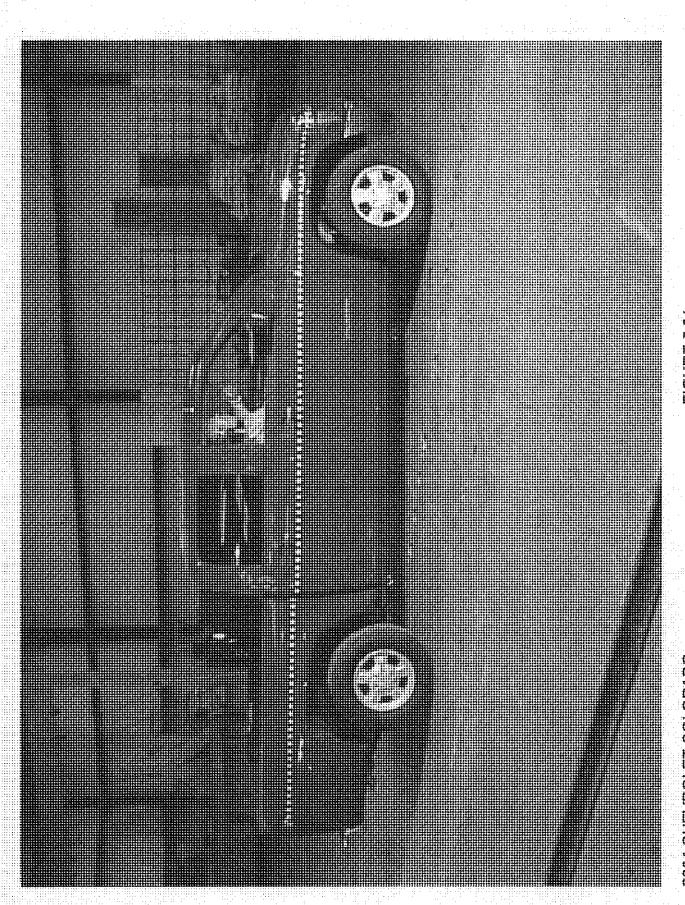


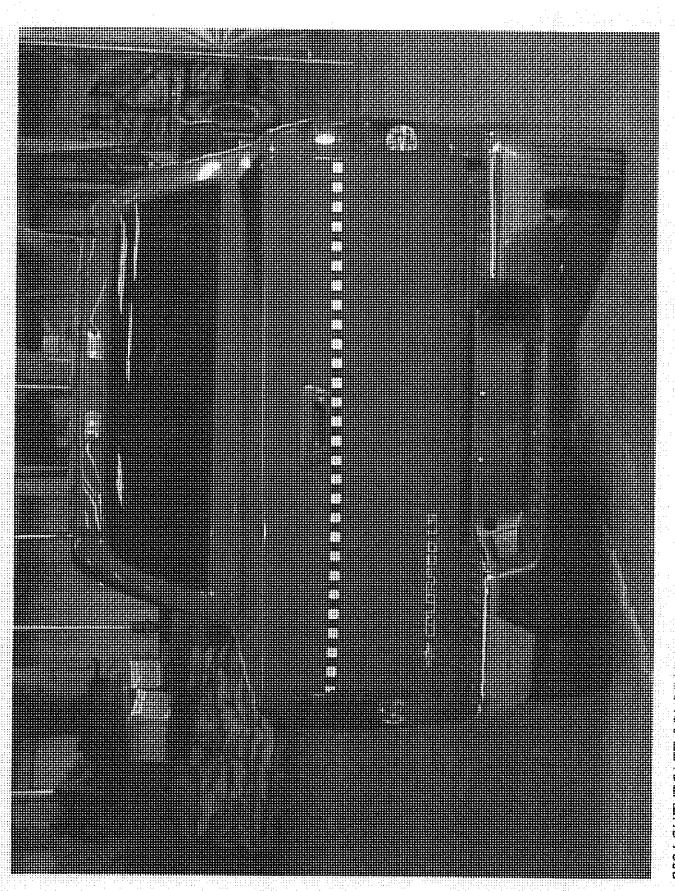
FIGURE 5.20 LEFT SIDE OF VEHICLE POST TEST

2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 3011.



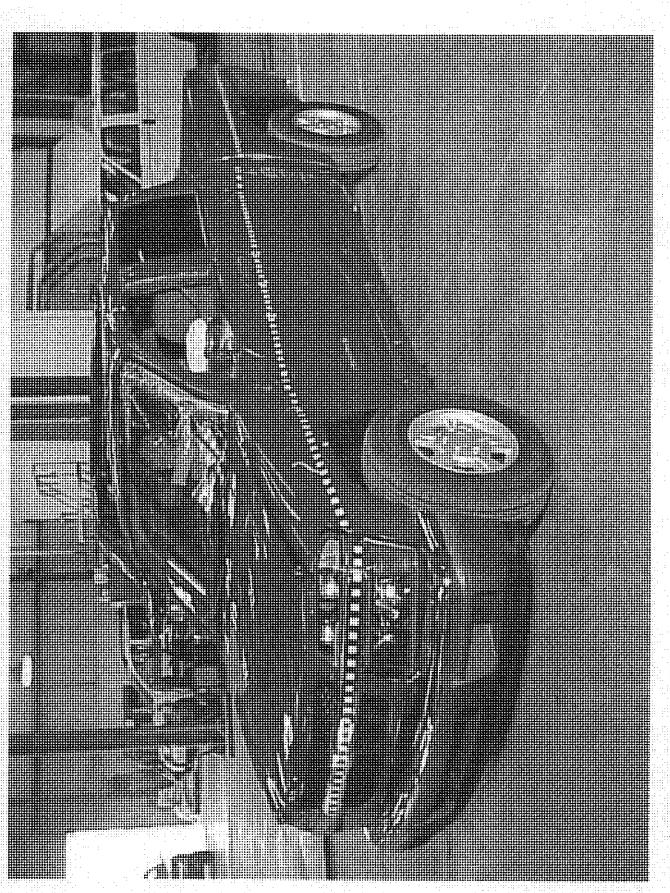
2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301L

FIGURE 5.21 RIGHT SIDE VIEW OF VEHICLE POST TEST



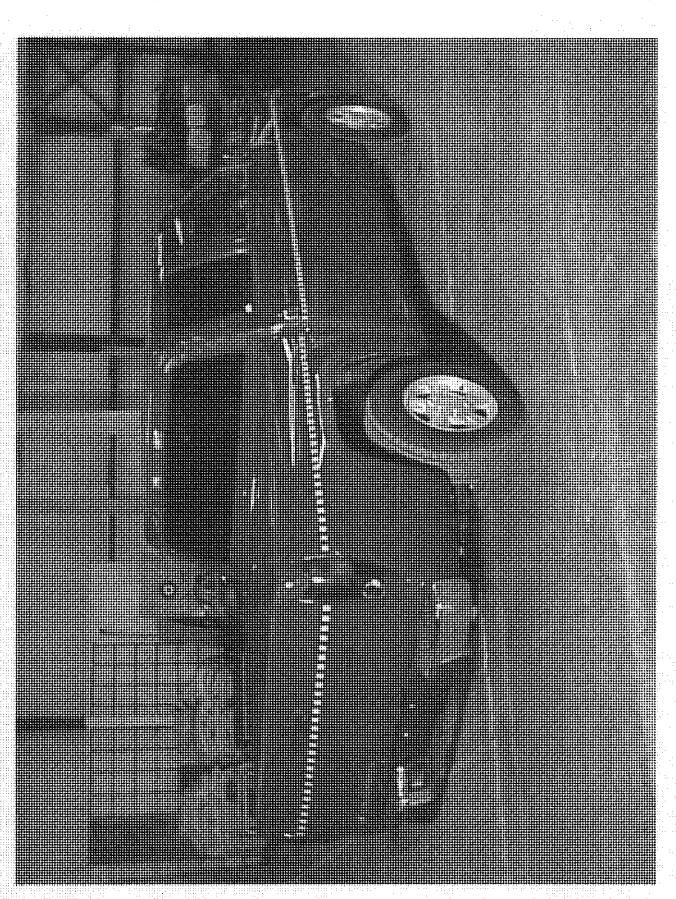
2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301L

FIGURE 5.22 REAR VIEW OF VEHICLE POST TEST



2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301L

FIGURE 5.23 % FRONTAL VIEW FROM LEFT SIDE OF VEHICLE POST TEST



2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301E

FIGURE 5.24 % REAR VIEW FROM RIGHT SIDE OF VEHICLE POST TEST

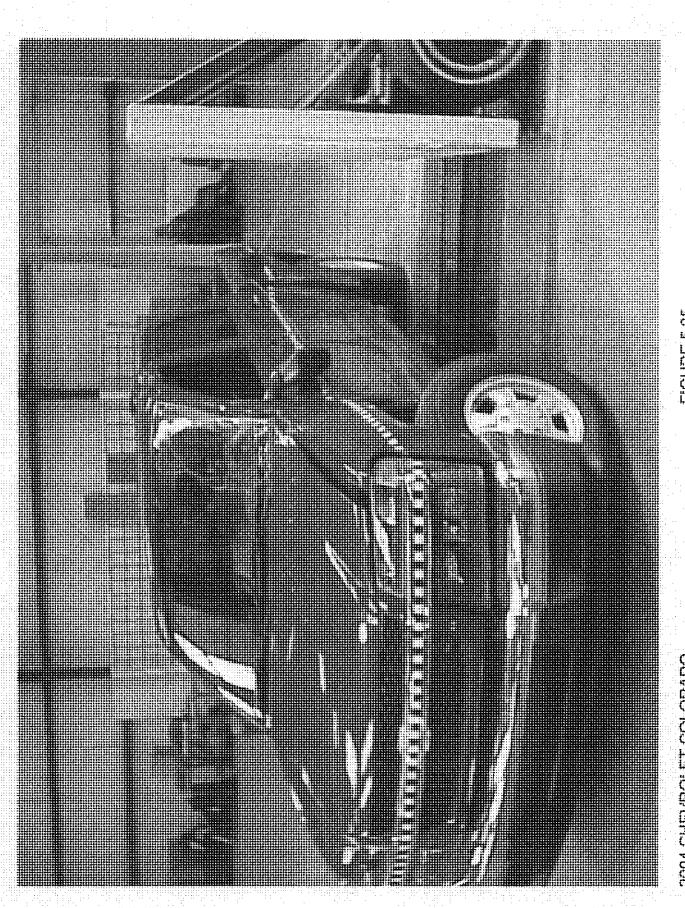
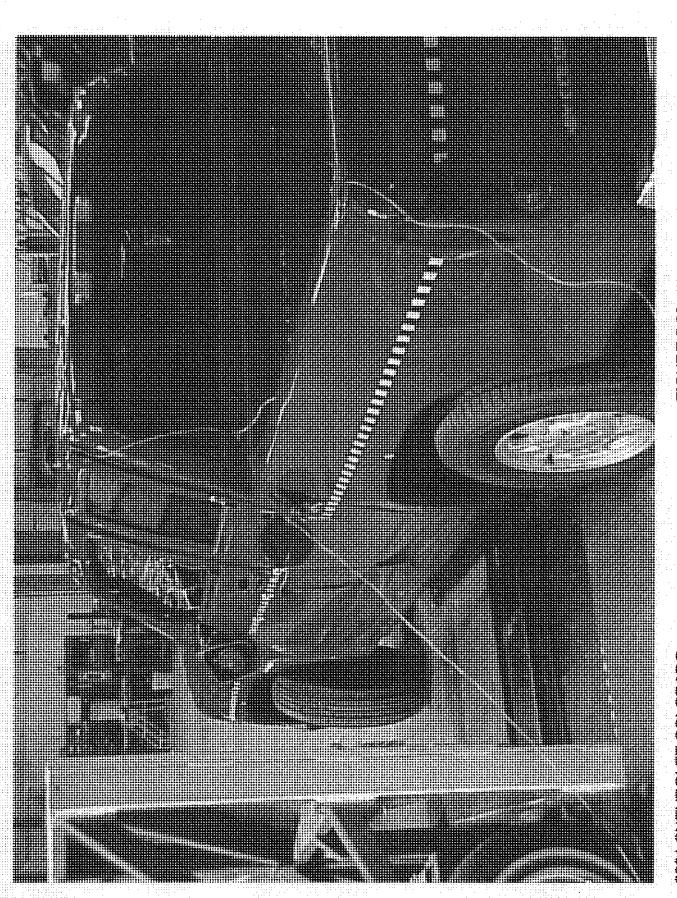
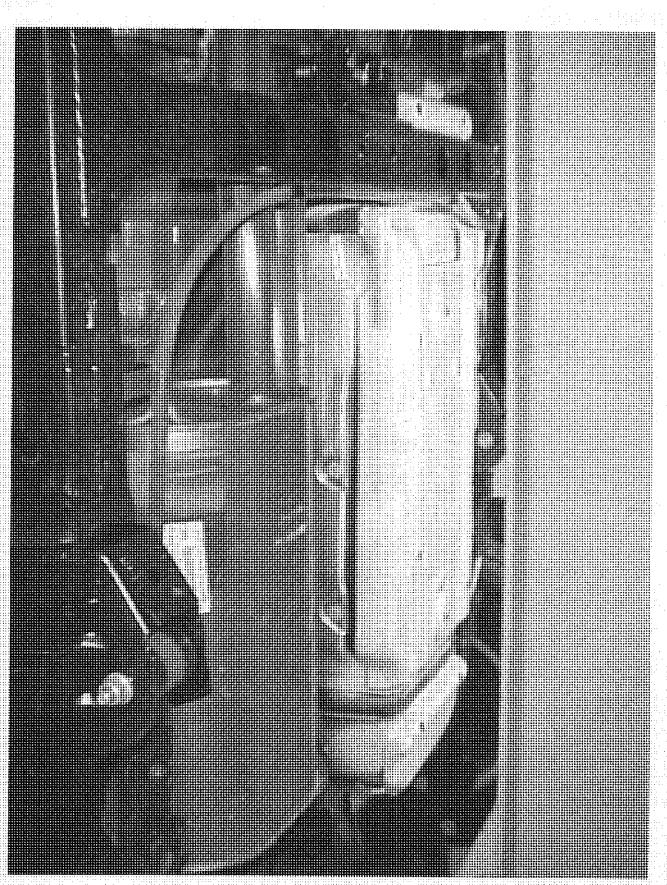


FIGURE 5.25 LEFT VIEW OF VEHICLE/BARRIER POST TEST



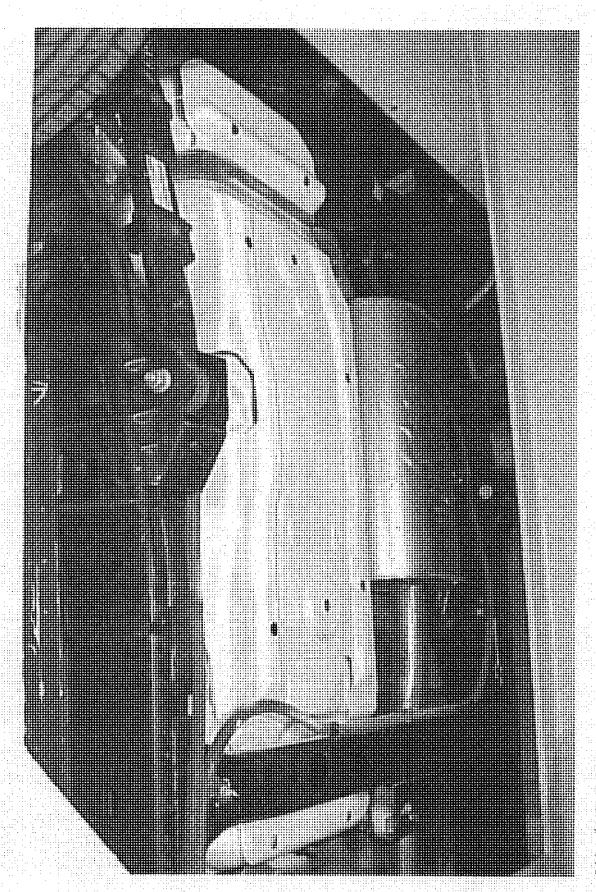
2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301E.

FIGURE 5.26 RIGHT VIEW OF VEHICLE/BARRIER POST TEST



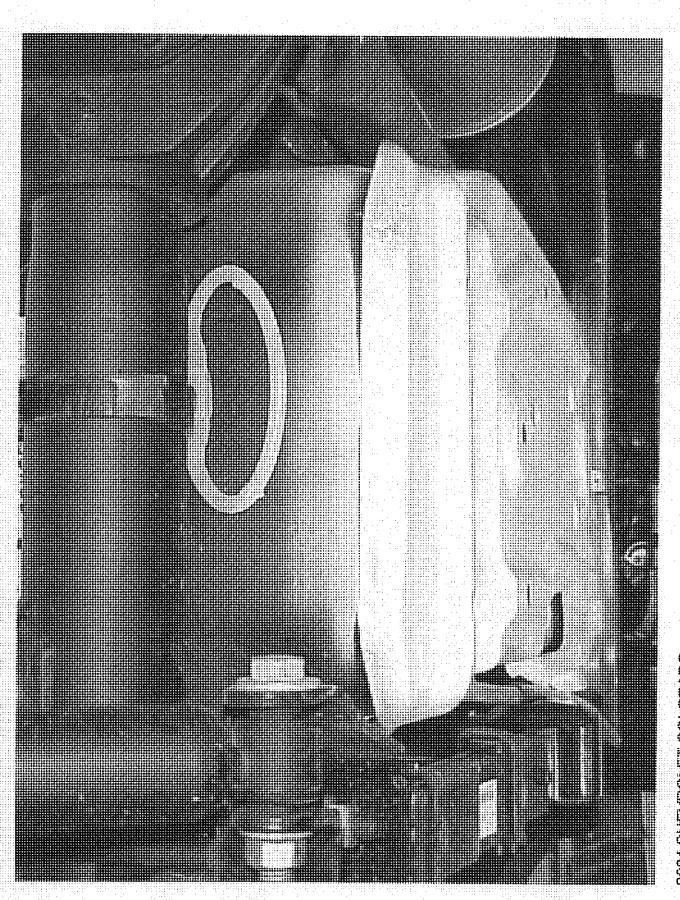
2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301L

FIGURE 5.27 UNDERBODY VIEW OF FUEL TANK RIGHT VIEW POST TEST



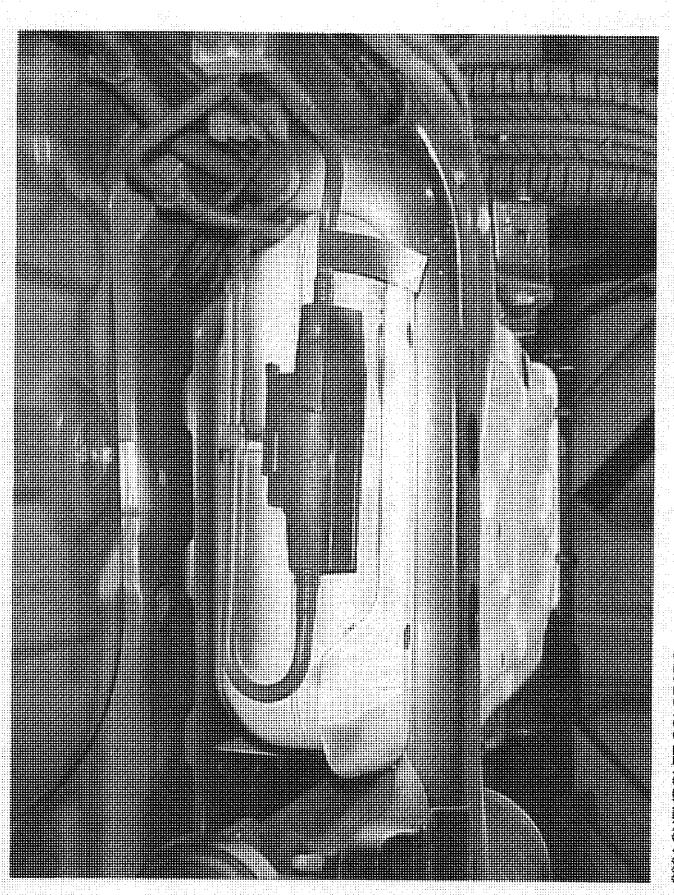
2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 3011.

FIGURE 5.28 UNDERBODY VIEW OF FUEL TANK LEFT VIEW POST TEST



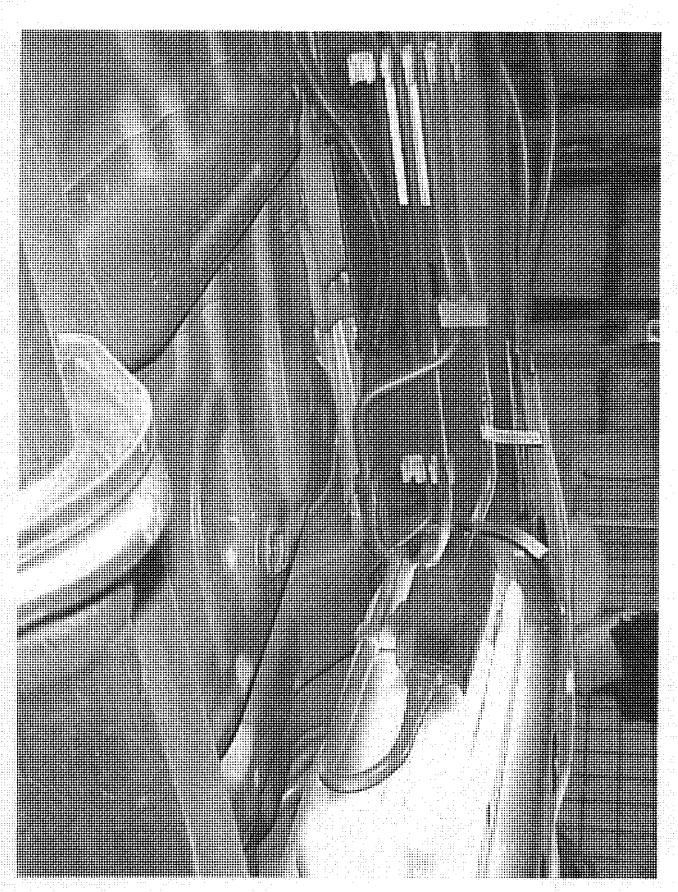
2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301L

FIGURE 5.29 UNDERBODY VIEW OF FUEL TANK REAR VIEW POST TEST



2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301L

FIGURE 5.30 UNDERBODY VIEW OF FUEL TANK FRONT VIEW POST TEST



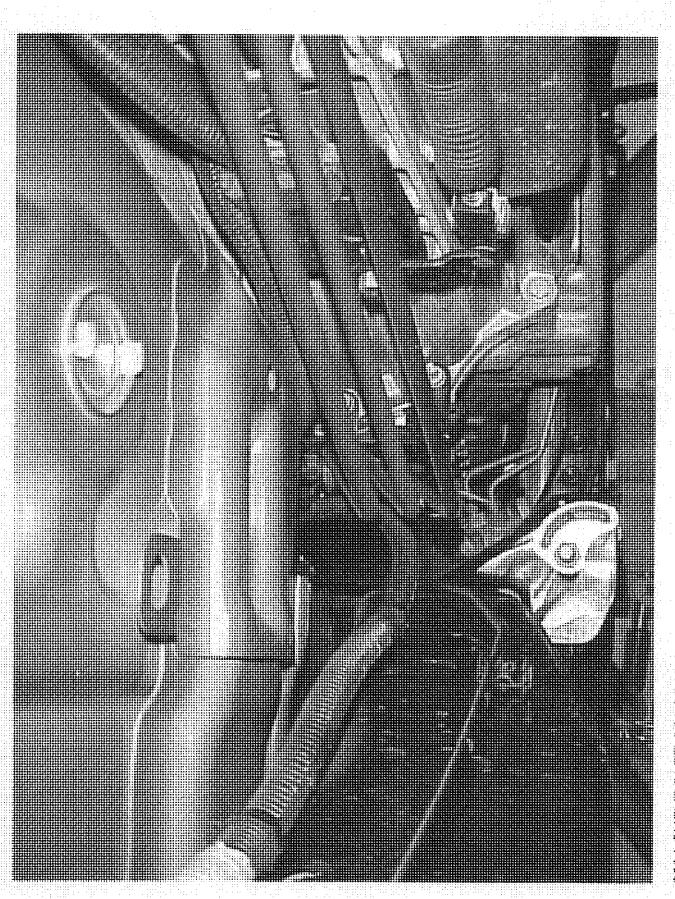
2004 CHEVROLET COLORADO NETSA NO. CA0112 NETSA NO. 301L

FIGURE 5.31 UNDERBODY VIEW OF FLIEL FILTER AND LINES AT TANK POST TEST



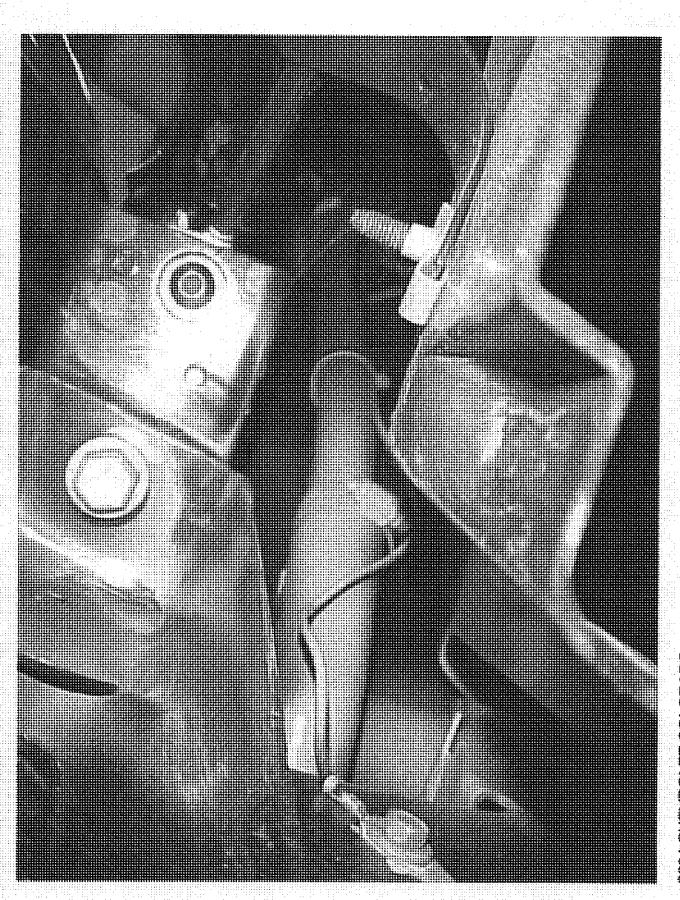
2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 3011.

FIGURE 5.32 UNDERBODY VIEW OF FUEL LINES IN CENTER POST TEST



2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301L

FIGURE 5.33 UNDERBODY VIEW OF FUEL LINES TO ENGINE POST TEST



2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 301L

FIGURE 5.34 UNDERBODY VIEW OF FUEL FILL HOSE POST TEST

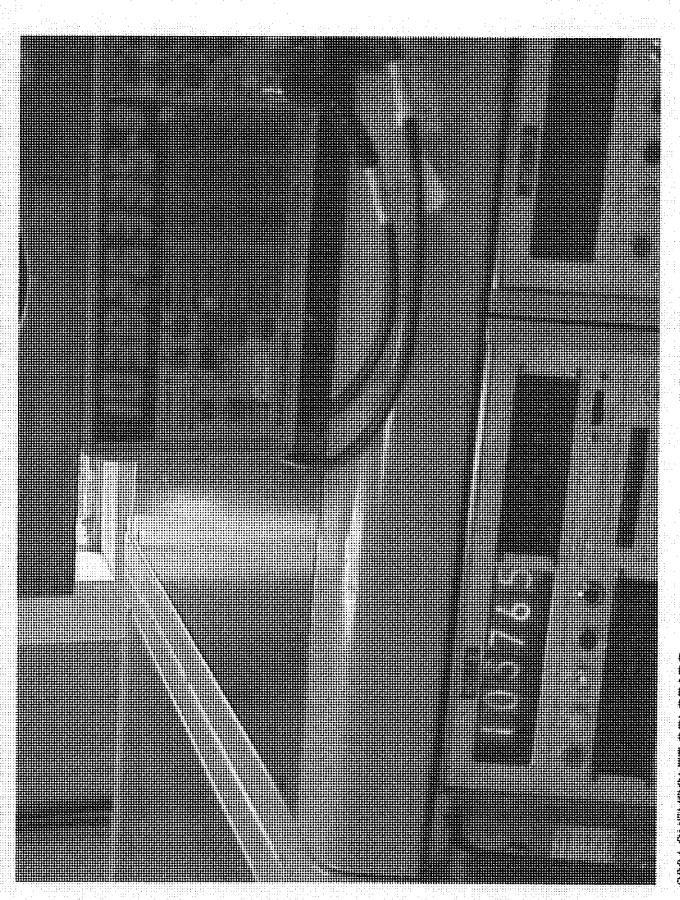
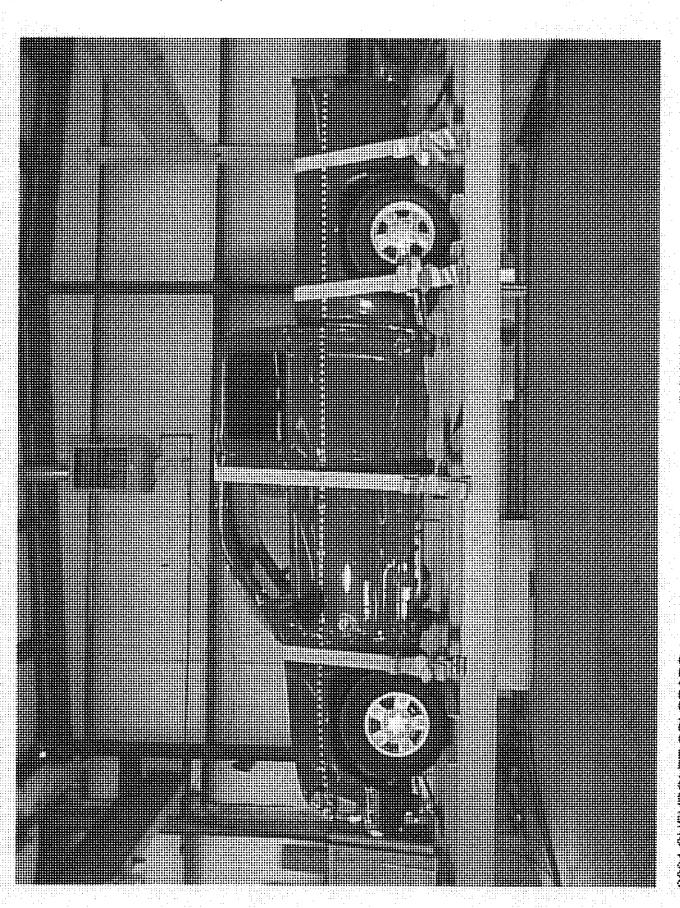


FIGURE 5.35 SPEED COUNTERS POST TEST



2004 CHEVROLET COLORADO NHTSA NO. C40112 NHTSA NO. 3011.

FIGURE 5.36 VEHICLE IN ROLLOVER FIXTURE AT 0°

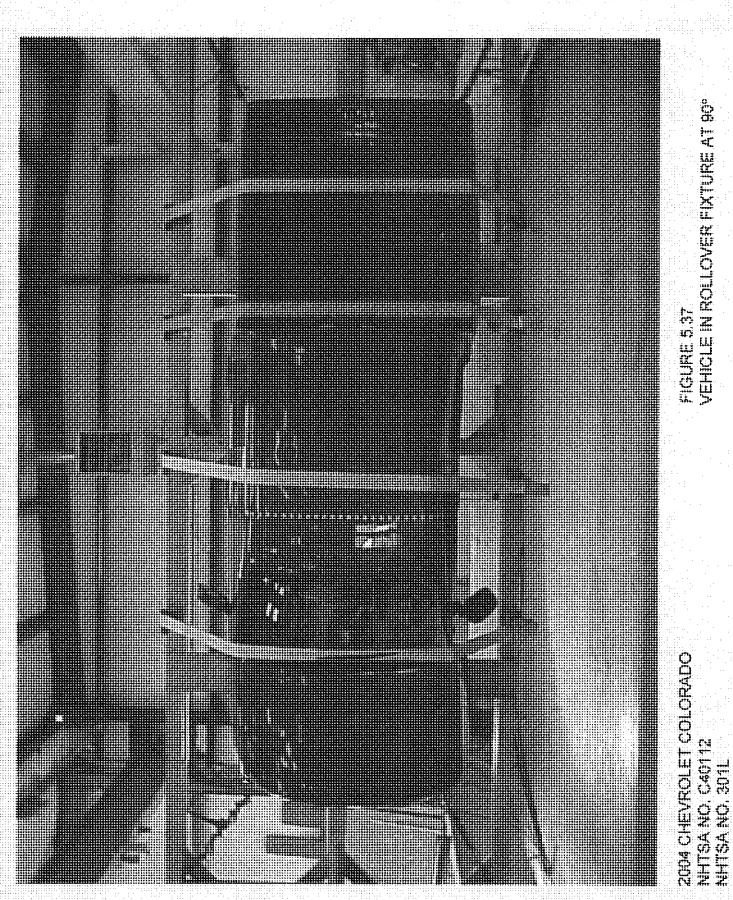
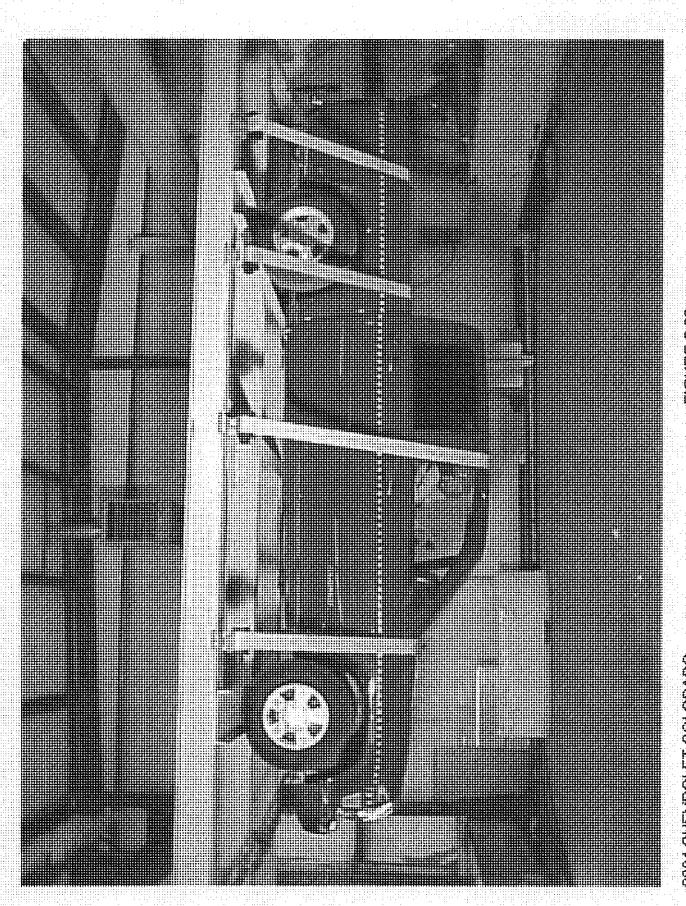


FIGURE 5.37 VEHICLE IN ROLLOVER FIXTURE AT 90°



2004 CHEVROLET COLORADO NHTSA NO. CA0112 NHTSA NO. 301L

FIGURE 5,38 VEHICLE IN ROLLOVER FIXTURE AT 180°

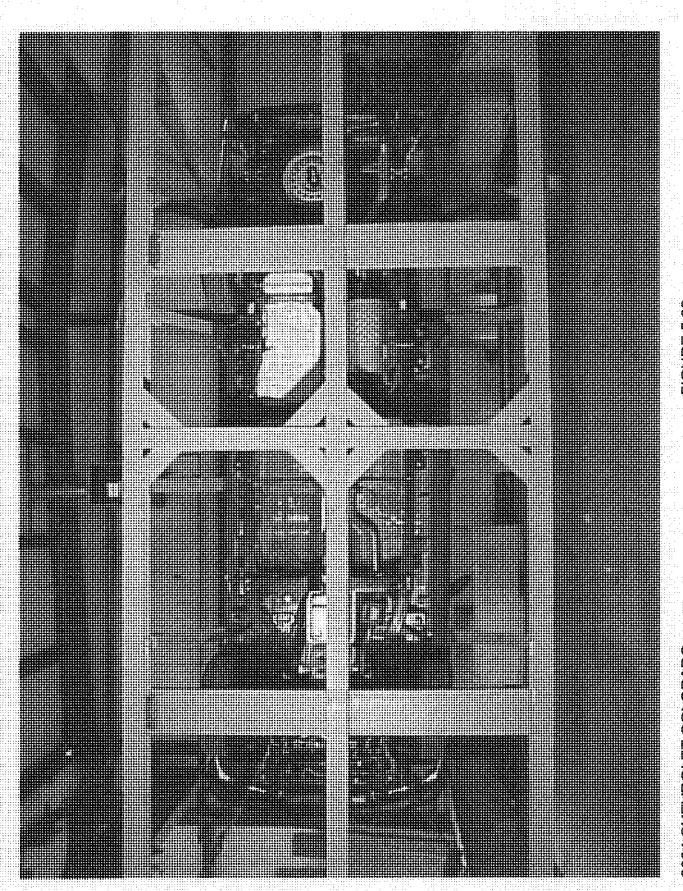
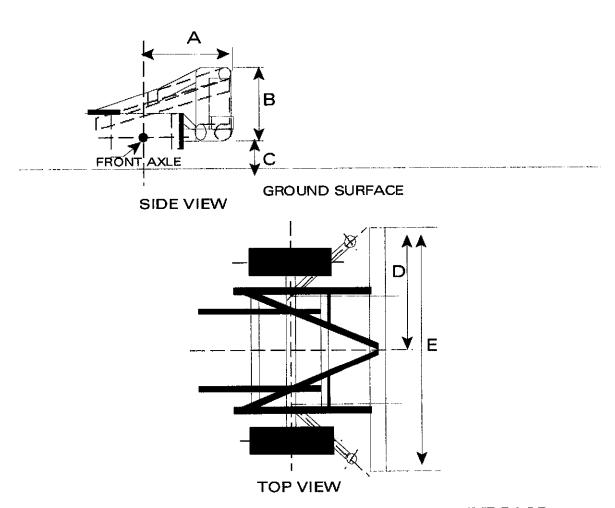


FIGURE 5.39
VEHICLE IN ROLLOVER FIXTURE AT 270°

2004 CHEVROLET COLORADO NHTSA NO. CADTIZ NHTSA NO. 301L

SECTION 6

BARRIER INFORMATION



DIMENSIONS SHOWN IN TABLE ON NEXT PAGE

NOTES:

1.Face Plate 0.50 in. (19mm) thick cold rolled steell
2.All Inner Reinforcements 4.0 x 2.0 x 0.19 in. (102 x 51 x 5mm) Steel Tubing

3. Impact Surface above shown without .75 \times 48 \times 96 in. Plywood Face attached

LETTER	INCHES	MILLIMETERS
A	20.5*	521*
В	60.0	1524
С	5.0	127
D	39.0	991
E	78.0	198

TEST SET-UP OF COMMON CARRIAGE WITH 60" x 78" FLAT FACE IMPACT SURFACE INSTALLED:

LEFT FRONT WEIGHT 1075
RIGHT FRONT WEIGHT 1075
LEFT REAR WEIGHT 887
RIGHT REAR WEIGHT 887

TOTAL WEIGHT 3924

DIMENSIONS FOR GTL 60" x 78" FLAT FACE IMPACT SURFACE

^{*} EXCLUDING 3/4" PLYWOOD FACE